

Christopher Krasniak

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Technical Skills

PROGRAMMING LANGUAGES: Python | SQL | GitHub | MATLAB |

DATA SCIENCE & MACHINE LEARNING: Python for Data Processing & Visualization (Pandas | Numpy | Seaborn | Pyplot) | Machine Learning (Sklearn | Scipy | Keras) | Advanced statistical analyses (Scipy | custom) | Git (GitHub | command line | GitKraken) | Unsupervised Learning (K-Means | Clustering) | Linear & Logistic Regression (Sklearn) | Decision Trees (Sklearn, XGBoost) | Feature Engineering and Pipelines (Sklearn) | Distributed computing (pySpark)

INDUSTRY KNOWLEDGE: Data Cleaning, Analysis, & Visualization | Technical Writing & Presentation | Advanced Statistics | Lay Audience Communication | Experimental Design | Data Interpretation | Exploratory Data Analysis

Education

Data Scientist Certification – Fellowship Program | The Data Incubator | Aug 2022 – Selected for capstone showcase.

Ph. D. in Neuroscience | Cold Spring Harbor Laboratory | May 2022 – Neural imaging and manipulation in behaving mice.

B.A. Biology and Psychology | Colby College | May 2016 – Honors: Phi Beta Kappa, Summa Cum Laude, Presidential Scholar.

Experience

COLD SPRING HARBOR LABORATORY

Aug 2016 – May 2022

Imaging and Manipulating Mouse Cortical Decision-Making

- Acted as Graduate Researcher at the #1 biological research institution. Presented at The Society for Neuroscience (2021).
- Led large-scale project determining the role of single brain regions in decision-making during a complex behavioral task.
- Recorded 100Tb neural imaging data from mice. Automated processing and data transfer (Python, MATLAB).
- Created multi-stage analytic pipeline (PCA, curve fitting, etc.) to create publication-ready figures (Matplotlib, Seaborn).

INTERNATIONAL BRAIN LABORATORY

Apr 2018 – Apr 2022

PhD Researcher | Creating a standardized decision-making task for mice | Recording neural activity across the mouse brain

- Coordinated 20-member team to develop a standardized behavioral task, the first for multi-site research in neuroscience.
- Co-authored ≈200-page protocols for apparatus building, installation, required code, and experiment procedure.
- Contributor to final paper published in eLife. Reviewed code to ensure repeatability of analyses (Python, clean conda)

COLBY COLLEGE

Sep 2013 – Jun 2019

Teaching Assistant

- Guided student researchers to design, troubleshoot experiments and statistical tests (SPSS) in statistics & psychology.

UNIVERSITY OF CALIFORNIA SAN FRANCISCO

Jun – Aug 2015

NSF REU Research Assistant

- Contributed to epilepsy drug screening with novel zebrafish cardiac monitoring tool included in 2 publications.

Projects

INCOME OPTIMIZER FOR AIRBNB HOSTS

[Github](#)

Scraped and cleaned listing data to train a XGBoost model to predict occupancy rates. Created a web app to optimize listings for income.

IMAGING AND MANIPULATING MOUSE CORTICAL DECISION-MAKING

[Thesis](#)

Recorded behavioral data with Arduino and Python. Utilized Python and MATLAB to automate 100Tb+ of data processing and transfer.

CREATING A STANDARDIZED DECISION-MAKING TASK FOR MICE

[eLife](#)

Collaborated with cross-functional team. Served as code reviewer to ensure reproducibility (Python, clean conda).